INTERNATIONAL SEARCH REPORT

International application No.
PCT/JP2004/008940

A. CLASSIFICATION OF SUBJECT MATTER
Int.Cl[7] D01F6/86

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
Int.Cl[7] D01F6/62, 84, 86, 92

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
Jitsuyo Shinan Koho 1926-1996 Toroku Jitsuyo Shinan Koho 1994-2004
Kokai Jitsuyo Shinan Koho 1971-2004 Jitsuyo Shinan Toroku Koho 1996-2004

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X Y A	JP 8-337923 A (Teijin Ltd.), 24 December, 1996 (24.12.96), Claims; Par. Nos. [0014], [0029] (Family: none)	1,6-8 9,10 2-5,11-13
Y	JP 8-209459 A (Nippon Ester Kabushiki Kaisha), 13 August, 1996 (13.08.96), Claims (Family: none)	9,10
A	JP 62-231063 A (Toray Industries, Inc.), 09 October, 1987 (09.10.87), Claims (Family: none)	1-13

[X] Further documents are listed in the continuation of Box C. [ ] See patent family annex.

* Special categories of cited documents:
"A" document defining the general state of the art which is not considered to be of particular relevance
"E" earlier application or patent but published on or after the international filing date
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"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
21 September, 2004 (21.09.04)	12 October, 2004 (12.10.04)
Name and mailing address of the ISA/ Japanese Patent Office Facsimile No.	Authorized officer Telephone No.

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PCT/JP2004/008940

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	JP 48-10346 A (Toyobo Co., Ltd.), 09 February, 1973 (09.02.73), Claims (Family: none)	1-13
A	JP 2000-73232 A (Nippon Ester Kabushiki Kaisha), 07 March, 2000 (07.03.00), Claims (Family: none)	1-13
E,A	JP 2003-335929 A (Teijin Ltd.), 28 November, 2003 (28.11.03), Claims (Family: none)	1-13

Claim 1 relates to an elastic fiber which is made of a polyether elastomer comprising polybutylene terephthalate as the hard segment and polyoxyethylene glycol as the soft segment and has the properties of "moisture absorption of 5% or above at 35°C and 95% RH and elongation on water absorption of 10% or above". Although claim 1 includes all elastic fibers which are made of a polyether elastomer comprising polybutylene terephthalate as the hard segment and polyoxyethylene glycol as the soft segment and have the above properties, only such elastic fibers having hard segment/soft segment ratios falling within the range of 30 : 70 to 70 : 30 by mass are disclosed within the meaning of PCT Article 5. Thus, claim 1 is inadequately supported by the description within the meaning of PCT Article 6.

Further, the scope of elastic fibers made of a polyether elastomer comprising polybutylene terephthalate as the hard segment and polyoxyethylene glycol as the soft segment and having the properties of "moisture absorption of 5% or above at 35°C and 95% RH and elongation on water absorption of 10% or above" cannot be defined even in view of the common general technical knowledge at the time of filing. Thus, claim 1 does not satisfy the requirement of clearness provided for in PCT Article 6.

Additionally, in claims 6 and 7, the elastic fiber is specified by the features as to "ratio of crystal-fusion peak height on the lower temperature side to crystal-fusion peak height on the higher temperature side, i.e., Hm1/Hm2" and "crystal-fusion peak temperature on the lower temperature side, i.e., Tm1, and crystal-fusion peak temperature on the higher temperature side, i.e., Tm2", and claims 6 and 7 include all elastic fibers which are made of a polyether elastomer comprising polybutylene terephthalate as the hard segment and polyoxyethylene glycol as the soft segment and specified by the above features. However, only such elastic fibers having hard segment/soft segment ratios falling within the range of 30: 70 to 70 : 30 by mass are disclosed within the meaning of PCT Article 5. Thus, claims 6 and 7 are inadequately supported by the description within the meaning of PCT Article 6.

Further, the scope of elastic fibers made of a polyether elastomer comprising polybutylene terephthalate as the hard segment and polyoxyethylene glycol as the soft segment and specified by the above features as to "ratio of crystal-fusion peak height on the lower temperature side to crystal-fusion peak height on the higher temperature side, i.e., Hm1/Hm2" and "crystal-fusion peak temperature on the lower temperature side, i.e., Tm1, and crystal-fusion peak temperature on the higher temperature side, i.e., Tm2" cannot be defined even in view of the common general technical knowledge at the time of filing. Thus, claim 1 doesn't satisfy the requirement of clearness provided for in PCT Article 6.

Accordingly, this search has been made only on elastic fibers which are made of the polyether elastomers specifically disclosed in the description, that is, polyether elastomers which comprise polybutylene terephthalate as the hard segment and polyoxyethylene glycol as the soft segment and have hard segment/soft segment ratios falling within the range of 30 : 70 to 70 : 30 by mass.